

0897: SAFETY AND EFFICACY OF ZOLEDRONIC ACID ON BONE MINERAL DENSITY IN PATIENTS WITH PROSTATE CANCER UNDERGOING ANDROGEN DEPRIVATION THERAPY: SYSTEMATIC REVIEW AND META-ANALYSIS

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Aim: This study aims at synthesizing evidence from published RCTs about safety and efficacy of Zoledronic acid (ZA) on bone mineral density (BMD) for prostate cancer (PCa) patients undergoing androgen deprivation therapy (ADT).

Methods: We searched PubMed through September 2014 using relevant key words "zoledronic acid", "prostate cancer", and "bone". Data were extracted from eligible studies, quality was assessed in strict accordance to Cochrane handbook and data were analyzed using RevMan 5.3 for windows.

Results: Eight RCTs with a total of 713 patients were eligible for this study. The pooled mean difference of percentage change in BMD between ZA and control group favored the ZA group than the control group in terms of: lumbar spine (MD=7.80%, 95% CI=[5.80, 9.80]), total hip (MD=3.76%, 95% CI=[3.18;4.35]) and femoral neck (MD=3.75%, 95% CI=[2.84;4.65]). Of the six adverse events we analyzed (arthralgia, constipation, fatigue, fever, respiratory infection and hot flashes), fever and fatigue were more common in Zoledronic acid group than control group (RR=1.49, 95% CI=[1.04, 2.12] and RR=4.27, 95% CI=[1.59,11.44]) respectively.

Conclusion: Intravenous ZA was safe and tolerated in this population. ZA achieved therapeutic success (>3% change in BMD) in patients with PCa undergoing ADT with less adverse events.

0912: ANTIMICROBIAL RESISTENCE IN URINARY TRACT ISOLATES ASSOCIATED WITH URETERIC STENTS

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Aim: 1. To investigate the microorganisms responsible for UTI in patients with indwelling J ureteral stents. 2. Compare the frequency distribution of urinary isolates against Health Protection Scotland data for UTI. 3. Compare the antimicrobial susceptibility pattern of the isolates against Health Protection Scotland Data.

Methods: We analysed 6 months theatre records to identify any patients with an insertion, removal or change or ureteral stent. We then examined our electronic clinical record system (Clinical Portal) and microbiology electronic record system (TelePath) for positive urinary cultures. Identifying all positive urine cultures taken while a stent was in situ and assessing their antimicrobial profiles. Finally we assessed the frequency of individual urinary isolates and compared this to epidemiological data from the Health Protection Scotland (HPS).

Results: A Statistically Significant difference in the distribution of urinary isolates was noted in our study, $\chi^2=414.951$ ($p<0.0001$), was demonstrated when compared to HPS epidemiological data.

Our study population demonstrated greater resistance to comparable antibiotics. A statistically significant increase in E.Coli resistance towards Ciprofloxacin ($p=0.01$), Co-amoxiclav ($p=0.05$), Gentamicin ($p<0.01$) & Trimethoprim ($p<0.01$) was demonstrated

Conclusion: Our study shows that urinary isolates associated with ureteral stents were more resistant to antibiotics used as empirical therapy and peri-operative prophylaxis.

0928: DOES INKING PROSTATE BIOPSIES HELP PREDICT OUTCOMES IN PROSTATE CANCER?

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Aim: To investigate whether capsule-to-cancer distance (CCD) in transrectal ultrasound-guided prostate biopsy (TRUS Bx) samples was useful in

predicting clinical and pathological outcomes in patients undergoing radical prostatectomy (RP) for prostate cancer (PCa).

Methods: We collected clinical and pathological data for patients who underwent TRUS Bx and subsequent RP at King's College Hospital between April 2011 and October 2013. Distance from the inked capsular end to cancer in TRUS Bx samples were measured by consultant histopathologists. Tumour on whole-mount RP specimens were also marked, scanned, and measured for proximity of tumour to the posterior capsule. All statistical analyses were conducted using Microsoft Excel and GraphPad Prism 5.0.

Results: Out of 310 patients who had inked TRUS Bxs, 46 patients subsequently underwent RP. 21.7% had a minimum CCD (MCCD) of 0mm as assessed by TRUS Bx. TRUS-MCCD was significantly less in patients with an RP-MCCD of 0mm ($p=0.047$). TRUS-MCCD >2mm was associated with MCCD >0mm in RP specimens ($p=0.03$). MCCD did not predict pathological stage, Gleason score, biochemical recurrence, or margin status.

Conclusion: TRUS-MCCD did not predict final pathological stage or oncological outcome after RP. TRUS-MCCD predicted RP-MCCD which could aid surgical planning. Further research with a larger cohort is necessary.

0937: DOES ENHANCEMENT OF RENAL TUMOUR ON COMPUTED TOMOGRAPHY IMAGING CORRELATE TO HISTOLOGICAL TYPE OR GRADE OF TUMOUR?

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Aim: Prognosis for renal cell carcinoma depends on stage, grade and histology of tumour. There is increasing evidence that degree of enhancement between pre and post contrast CT images can assist in determining grade and histology of renal tumours. We investigated whether enhancement on CT correlated to particular histological types or grades of tumour in our centre.

Methods: Data was collected from 93 patients with renal tumours using from December 2012 to March 2014. 34 were ineligible (29 no histology, 1 colonic met, 4 benign). Contrast enhancement was defined as >20HU and measured using local imaging programme.

Results: Of 59 eligible patients, 16 underwent CT with both pre and post contrast phase. 14 had enhancing lesions; 6 were grade II (mean enhancement 25.3HU to 74HU), 7 were grade III (31.8HU to 74.14) and 1 was grade IV (42HU - 134). 1 patient wasn't graded on the pathology report. There was no difference between the degree of enhancement in the different histological subtypes.

Conclusion: Our study showed there was no significant difference in contrast enhancement between grade and histological subtype of RCC. Further evaluation with a larger patient group could help determine any correlation between tumour characteristics and degree of contrast enhancement.

0943: THE DIAGNOSTIC VALUE OF MRI-BASED PSA DENSITY TO PREDICT THE OUTCOME OF PRIMARY TRANSPERINEAL SECTOR-GUIDED PROSTATE BIOPSY

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Aim: This study aimed at determining the diagnostic value of MRI-based PSA density (MR-PSAD) for the presence of prostate cancer on subsequent transperineal sector-guided prostate biopsies (TPSBx).

Methods: Consecutive biopsy-naïve men undergoing primary TPSBx between 2007 and 2014 were considered. A systematic biopsy protocol was used. Using MRI, an ellipsoid approximation was used to calculate volume. Histological outcomes were assessed for the presence of any cancer or significant cancer, defined as either the presence of Gleason 4 or ≥4mm tumour core length (G4) or Gleason 4 or ≥6mm tumour core length (G6). Receiver operated characteristics were created and areas under the curve (AUC) with 95% confidence intervals (CI) were compared for PSA and MR-PSAD.

Results: A total of 659 men were evaluated with mean (\pm SD) age 63 (\pm 9) years, PSA 8.2 (\pm 5.6) mcg/l, prostate volume 48 (\pm 27) cc and MR-PSAD 0.2 (\pm 0.18) mcg/l/cc. The AUC (95% CI) was significantly better for MR-PSAD than PSA for all cancer definitions ($p<0.001$): 0.73 (0.69-0.77) vs. 0.61 (0.56-0.65) for any cancer; 0.75 (0.71-0.79) vs. 0.66 (0.61-0.70) for G4; 0.77

(0.73–0.81) vs. 0.68 (0.63–0.72) for G6. The sensitivities for MR-PSAD <0.1mcg/l/cc were 85%, 92% and 91% respectively.

Conclusion: MR-PSAD is a significantly better predictor of biopsy outcomes than PSA.

0948: OUTCOMES FOR TRANSPERINEAL TEMPLATE GUIDED PROSTATE BIOPSY

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Aim: Transperineal template prostate biopsy (TMP) is gaining increasing popularity as a diagnostic modality for prostate cancer (CaP). We aim to present our audit data for TMP performed on patients with elevated prostate specific antigen (PSA) and previous negative transrectal ultrasound guided prostate biopsy (TRUS).

Methods: Data has been collected retrospectively for 327 patients undergoing TMP at Bart's and the London NHS Trust over a 6 year period (2009 – 2014).

Results: Mean age of patients was 65 years (45 – 83) with 5.2% undergoing their first biopsy and at least 11.9% for restaging. Mean corrected PSA was 13.9 (0.05 – 132) and an average of 38 cores were taken per biopsy. Positive histology was reported in 37% hence providing a significant cancer detection rate with majority of the previous negative TRUS biopsies attributing to larger prostates. The probability of detecting significant prostate cancer in larger prostates with multiple previous negative TRUS biopsies (≥ 4) is rather low but we cannot comment on its clinical significance.

Conclusion: From our data we suggest that while TMP provides significant cancer detection rate it may be worth considering earlier TMP in cases of previous negative TRUS biopsies.

Posters: Vascular/Endovascular Surgery

0062: ESTABLISHING THE ROLE OF SERIAL FDG-PET/CT IN ASSESSING RESPONSE TO ANTIBIOTICS IN PATIENTS WITH INFECTED PROSTHETIC VASCULAR GRAFTS

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Aim: Evaluation of serial 18F-fluorodeoxyglucose positron emission/computed tomography (FDG-PET/CT) in monitoring response to treatment in infected grafts.

Methods: Seven patients with infected aortic grafts on long-term antibiotics underwent serial FDG-PET/CT, from February 2013– July 2014. Scans were evaluated for pattern, grade of uptake from one(not infected) to five(definite infection) and maximal standardised uptake value (SUVmax). The clinical course was retrospectively reviewed.

Results: All patients had two scans, four patients had three and one patient had five scans.

Qualitatively, the intensity of FDG uptake reduced with time. The median uptake grade in the first scans was 4 compared to 2 in the second. There was no difference in the mean SUVmax between groups (9.6 ± 4.7 versus 8.5 ± 4.1) $p=0.37$, nor a significant reduction in SUVmax with time, $p=0.97$. Results after three scans demonstrated a reduction in grade of uptake (4.5, 3.5, 3 respectively) but no difference in SUVmax between groups, $p=0.99$.

Conclusion: The reduction in grade of FDG uptake may represent a reduction in the overall extent of infection. As all scans remained positive, despite a clinical improvement, it may be that FDG-PET/CT is not a useful modality in monitoring clinical response to antibiotic therapy in patients with infected vascular grafts.

0107: AN AUDIT OF LOWER EXTREMITY AMPUTATION PRACTICE IN A UK VASCULAR CENTRE

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Aim: Lower extremity amputation is associated with significant morbidity and mortality. As such amputation is subject to clear guidelines as

produced by the UK Vascular Society. We aimed to measure how a UK vascular centre performs against these standards.

Methods: We used theatre records to identify all patients undergoing guillotine, below knee and above knee amputation over one year (Oct 13–14). Each patient's indication for surgery, perioperative details, post-operative progress and clinical investigations were subsequently established.

Results: 33 patients were undergoing lower extremity amputation. BKA:AKA ratio was 1.2 and unplanned revision surgery was 3%. In-hospital mortality was 15%. Less than 65% of operations were undertaken by doctors of consultant grade. There was a 41 day median length of stay. All patients had a low albumin level preoperatively and 47% were anaemic.

Conclusion: In-hospital mortality was within expected range while revision surgery had a lower rate than expected. We would advise consultant surgeon and anaesthetist presence in the operating theatre even if accompanied by very senior trainees. We would also recommend close attention to nutritional status in the pre-operative work up. Adopting these small changes and ensuring compliance with national standards could further improve outcomes for patients undergoing lower extremity amputation.

0119: AUDIT OF COMPLIANCE WITH THE VSGBI QUALITY IMPROVEMENT FRAMEWORK FOR MAJOR LIMB AMPUTATIONS AT THE ROYAL CORNWALL HOSPITAL

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Aim: To assess compliance with the VSGBI Quality Improvement Framework (QIF) for major amputation surgery at the Royal Cornwall Hospital.

Methods: The records of all patients undergoing major lower limb amputations between October 2012 and October 2013 were retrospectively reviewed. Perioperative care was assessed in relation to the criteria outlined in the QIF.

Results: 26 patients underwent major lower limb amputations during the audit period, of which 19 were male. The median age was 72 years (range: 48–91). 15 patients underwent a BKA and 11 underwent an AKA. Pre-operatively, 77% were assessed by a consultant anaesthetist and 58% were assessed by the rehabilitation team. 89% were prescribed VTE prophylaxis. 27% of cases were performed on an emergency list, of which 71% had their procedure within 48 hours. All patients were anaesthetised by a FRCA-qualified anaesthetist and all were operated on by a suitably trained surgeon. Post-operatively, all patients were reviewed by the rehabilitation team. The 30-day mortality rate was 12%.

Conclusion: Whilst our institution met many of the target criteria outlined in the QIF, there were a number of shortcomings. In order to address these deficiencies, we propose an "Amputation Pathway" which encapsulates all aspects of the quality improvement framework.

0189: OUTCOMES OF REGIONAL TRANSFERS OF RUPTURED ABDOMINAL AORTIC ANEURYSMS

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Aim: Vascular services are provided on a centralised basis. The VSQIP programme has improved mortality after AAA repair but local experience suggests those transferred with a ruptured AAA have increased morbidity.

Methods: We compared morbidity and 30-day mortality for operated ruptured AAAs at our unit over a two-year period. Occurrence of transfer and distance (as a proxy for time) to definitive care were recorded. Distance to definitive care was calculated from home postcode to local hospital and then to vascular centre.

Results: Transfer did not statistically increase mortality ($p=0.59$), but was associated with increased morbidity ($p=0.06$). ROC curve analysis suggested that the highest rate of complications was seen in those who travelled more than 8.9 miles. Distance to care of more than 13.9 miles was associated with serious complications such as ischaemic colitis and those affecting extremities.

Conclusion: Our results suggest no difference in mortality related to transfer, but distance to definitive care is associated with increased risk of complications. We did not consider management during transfer or pre-operatively, both of which impact on outcome. We plan further work to look at pre-transfer management and the development of post-